

# Growing WILD

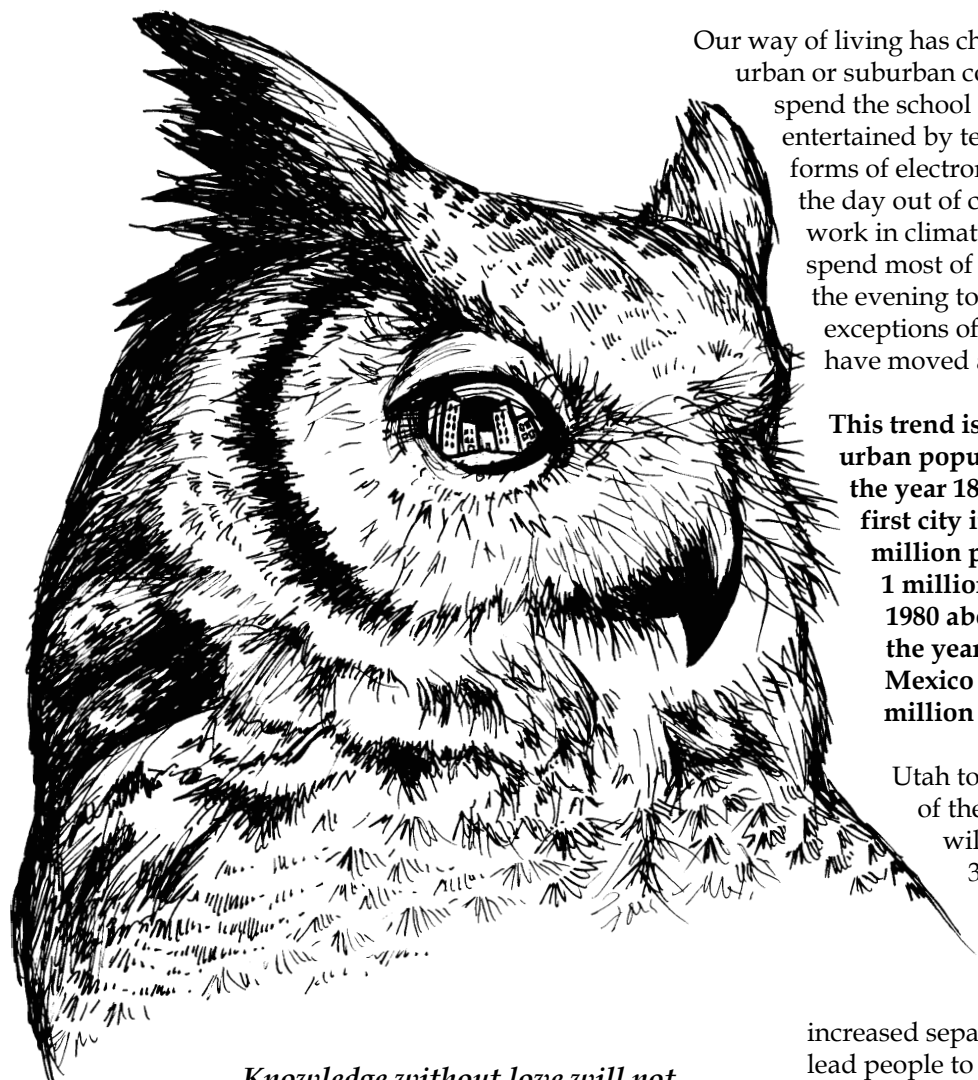
Winter 1996

Utah's Project WILD Newsletter



## A Wild Look at Cities

**N**ot long ago, most Americans lived their lives in rural communities. People grew up in close contact with nature as they worked the land, gathered wild foods, and played outdoors. For many people, these experiences provided an understanding and appreciation of nature. In fact, many early American conservationists like Aldo Leopold grew up in rural, agrarian communities.



Our way of living has changed. Today most Americans live in urban or suburban communities where children typically spend the school day indoors. After school, they are entertained by television, computer games, and other forms of electronic media. Adults too, spend most of the day out of contact with nature. We commute to work in climate controlled cars. Once at work, we spend most of the day indoors, only to return home in the evening to the "comforts" of our homes. With the exceptions of weekend trips or vacations, Americans have moved away from nature.

**This trend is not limited to America. Worldwide urban population growth has been enormous. In the year 1800, the Chinese city of Beijing was the first city in the world to reach a population of 1 million people. By 1900, there were 16 cities of 1 million people around the world, and by 1980 about 235. If we project current trends to the year 2025 we might see 200 megacities like Mexico City with populations between 4 million and 20 million people!**

Utah too, is feeling urban growth. Already one of the most urban states in the nation, Utah will see its population double in the next 32 years at the present rate of growth. Most of these people will live in cities.

In this increasingly urban world, some educators are concerned that an increased separation between humans and nature will lead people to devalue nature. Can today's educators nurture the connection between nature and children in urban and suburban communities? The answer is, yes! Many people across this country and the world are searching to find solutions to these challenges.

*Knowledge without love will not stick. But if love comes first, knowledge is sure to follow.*  
-John Burroughs-

*In this issue of Growing WILD we offer teaching suggestions, activities, resources and opportunities to connect children with nature in suburban and urban settings. Nature's Call, our kid's newsletter, is dedicated to educating young people about wildlife in Utah's cities. So turn the page and enter the world of urban wildlife!*

# Nurture Nature!

If you live in a city you will see pigeons, house sparrows, butterflies, spiders, housefinches and starlings. These animals represent a few of the countless opportunities to teach about nature in urban and suburban settings. Wild animals can be the foundation for a child's understanding of nature, but research suggests there are some important processes to understand and methods to employ when teaching about nature.

A recent article by David Sobel in the Autumn 1995 issue of *Orion* magazine gives guidance to teachers who want to explore the urban environment with their students. His suggestions center on developmentally appropriate teaching methods. He suggests there are three important stages a child goes through in developing understanding and respect for nature.

## Early Childhood - Ages 3-7

The major learning objectives at this stage should focus on helping children develop empathy for nature. Activities should cultivate relationships between children and animals, both real and imagined. Some suggestions are:

- Read stories, sing songs and develop seasonal celebrations that focus on wild animals.

## Elementary Years - Ages 7-11

The major learning objective at this stage should center on exploration. At this age children have a passion for discovery. Capture this interest and enthusiasm by encouraging local exploration. Some suggestions are:

- Make maps, search for treasures, follow streams and paths, create natural areas on schoolgrounds, hunt and gather and create small imaginary worlds.

## Early Adolescence - Ages 11-15

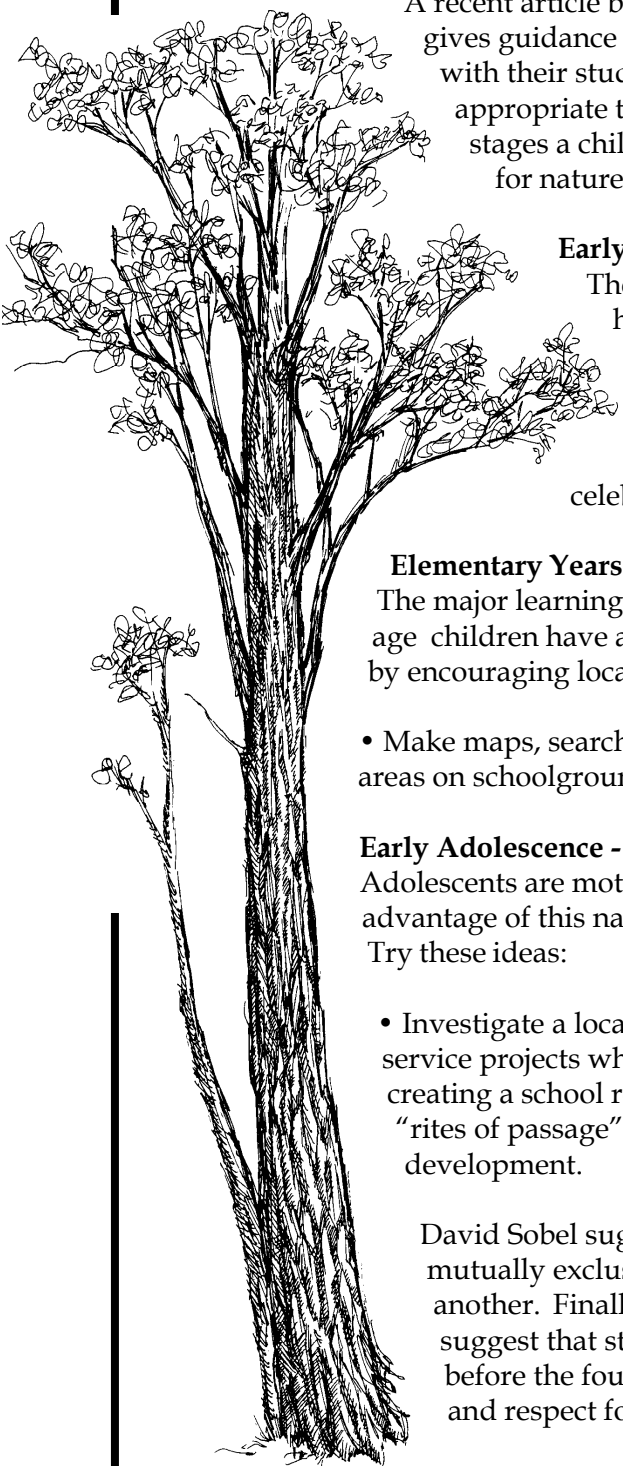
Adolescents are motivated by peer norming in their social group. Take advantage of this natural inclination by doing activities that are social in nature. Try these ideas:

- Investigate a local issue and do community service projects which address the issue, such as creating a school recycling program. Develop "rites of passage" during this stage of development.

*We should be attempting to engage children more deeply in knowing the flora, fauna, and character of their local places. The woods behind the school and the neighborhood streets and stores are the places to start.*

**-David Sobel-**

David Sobel suggests that these stages are not mutually exclusive, but build upon one another. Finally, Mr. Sobel cites research to suggest that students should not be exposed to environmental tragedies before the fourth grade. He suggests that students need to develop love and respect for nature before they can face complex issues.



## Urban Resources

## A Guide to City Life!

Contact the Project WILD office (801) 538-4719 to check out the following materials:

### Habitat Enhancement Guidebooks:

#### *Wildlife Conservation Manual For Urbanizing Areas In Utah*

A comprehensive text which explains how to live lightly and protect our relationship with wildlife within urban areas by building and maintaining wild habitat sites.

#### *NatureScaping Resource File*

A new resource file full of activity guides and technical information specific to Utah ecosystems. These resources will help you get your students outdoors to study nature and help wildlife. Some of the titles include: *WILD School Sites*, *Woodworking For Wildlife*, and *Creating Landscapes For Wildlife*.

### Activity Guides:

#### *A Place To Live*

A teacher's guide and student workbook produced by the National Audubon Society. The materials are aimed at developing student understanding of nature in urban areas.

#### *Living Lightly in the City - Volumes I (K-3) & II (4-6)*

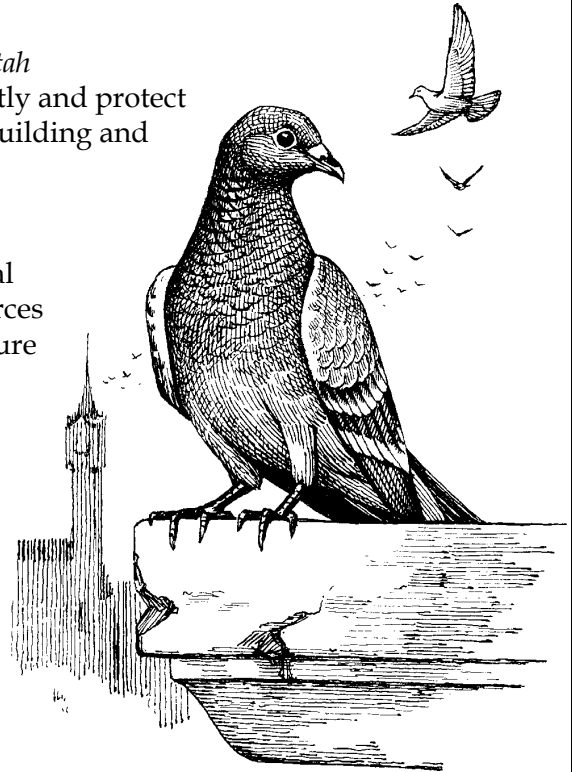
These two volumes contain a variety of activity ideas and resource materials. Volume I is filled with activities that encourage young children to explore their surroundings. The revised Volume II, filled with background information and reference lists, contains eight units covering a range of topics, including water resources, transportation, nature in the city and global perspectives.

#### *Living With Wildlife*

An educator guide that investigates wildlife conflicts in both urban and rural settings. Grades 6-8.

#### *Obis Activities*

Activities for exploration in an urban environment:  
Ants, Bean Bugs, Mapping a Study Site, Flower Powder, Supersoil, Wintergreen, Sticklers, Bugs, Worms & Others, Metric Capers, Isopods, Plants Around a Building, Birdfeeder, Bird Nests, Mystery Marauders, Snug as a Bug, Sensory Hi-Lo Hunt, Web Weavers, Web It, Litter Critters.



### *Pigeons are Cool!*

Pigeons provide students in urban schools a unique opportunity to observe bird behavior and natural selection. Join hundreds of other schools across the country by collecting information about pigeons. This information is then sent to the world famous Cornell Lab of Ornithology. The lab analyzes your information and then tells you and your class what this information means.

This program gives students an opportunity to get involved in real scientific research. For more information, please write:

Cornell Lab of Ornithology  
Bird Education Program  
159 Sapsucker Woods Road  
Ithaca, NY 14850-1999  
or call (607) 254-2440

## Utah City Critters

### Raccoon (*Procyon lotor*)

Most people recognize raccoons by their distinctive black masks and bushy, black and brown ringed tails. Their tracks, which resemble those of a small child, are easily identified as well.

Primarily a creature of woodlands, raccoons prefer forests and brushy areas along lakes, streams and marshes. Being especially opportunistic however, raccoons have adapted quickly to cities as well. Feeding at night, raccoons eat everything from fish, frogs, insects, eggs, fruits, nuts and plants. In cities, raccoons will seek out and raid garbage. Having mastered the trick of opening almost every type of lid or latch found on refuse containers has earned the raccoon its nick-name, "the masked bandit."

Raccoons rest during the day, curling up in protected areas under porches, within culverts, or in holes or crooks of trees. On warmer days, raccoons often sun themselves on tree limbs. But they are not easy to see. With ringed tails wrapped around their bodies, nice and tight, they blend in well with shadows cast by branches in the sunlight.

### House Sparrow (*Passer domesticus*)

House sparrows are not sparrows, but belong to a family of birds called weavers. These aggressive birds have become one of the most common songbirds in U.S. cities. House sparrows, native to eastern Europe, were first released in the U.S. in Brooklyn, NY in 1853 for the purpose of controlling insects. Subsequent releases were made in other cities, including Salt Lake City in 1873-74. They spread rapidly, out competing most native songbirds and destroying only a few insect pests.

Any nook on a building or natural cavity in a tree will be used as a nest site. The nest plays an important role in their lives, and is used for almost the entire year. In spring and summer, it is used for raising young, and in fall and winter, it becomes a roost site. Nests are cleaned and refurbished, and then reused over and over.

Two to three clutches of about 5 whitish eggs are laid each breeding season. The female incubates the eggs, but both parents care for nestlings. After fledging, juveniles join the large flocks heard throughout fall and winter. The continuous chirping of the house sparrows is thought to convey information about food sources between flock members.



### Common Carp (*Cyprinus carpio*)

Carp were introduced into the U.S. from Eurasia in 1831. By 1881, they had been planted in Utah, and have become the most abundant warmwater fish in the state. Carp can be found in almost every waterbody on the Wasatch Front. They prefer warm, shallow water with plenty of aquatic vegetation.

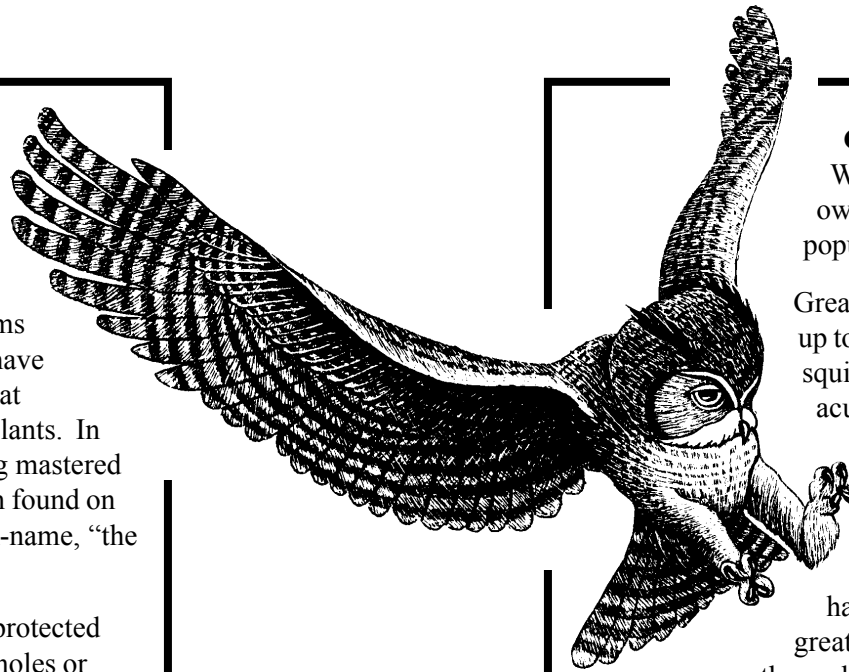
Carp are recognized by two pairs of different lengthed barbels on the sides of their mouths. Their bodies are olive green to bluish or dark green above, shading to yellow below. Carp spawn in late May to early June when water temperatures rise above 57 F. They are prolific, and a 4 pound female can lay up to 500,000 eggs. Feeding on insect larvae, crustaceans, small mollusks, and aquatic plants, carp grow rapidly, and commonly reach 20 pounds or more and 18 inches in length.

Carp have a negative impact on native fish populations. Their foraging and spawning behaviors tend to increase muddiness of waters. Because of their great numbers and the problems they cause, anglers are allowed to catch an unlimited number of carp. Wintering Bald Eagles have learned to take advantage of the bounty of carp as well!

### Pigeon (*Columba livia*)

No city would seem complete without pigeons roosting on buildings, nesting under bridges and strutting about in parks. Known as Rock Doves, pigeons in North American cities are feral descendants from birds brought across the Atlantic in the 1600s.

In cities, pigeons feed on bits of food left on the ground by people. Experiments have shown that pigeons are opportunistic, and learn new food finding behaviors through social interactions with other pigeons. Adding to the pigeon's success, is their ability to breed four to five times a year. Nests are built on building ledges and beneath bridges in urban areas. Two white eggs are usually laid and are incubated by both parents. Hatching occurs after about eighteen days. Two weeks later the young birds are ready to join the flock.

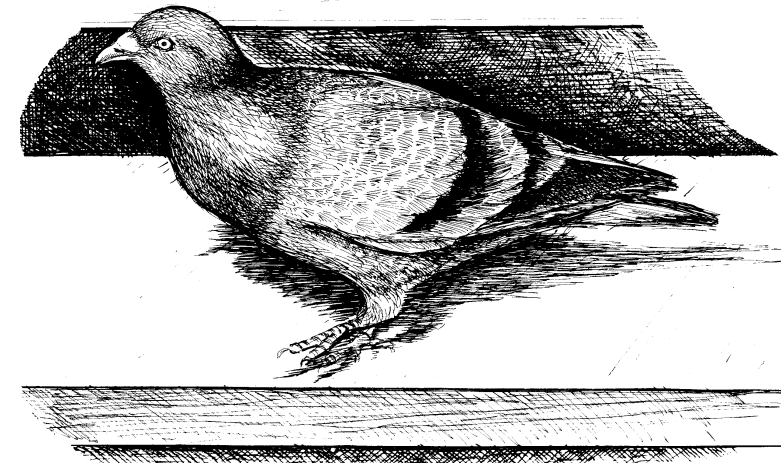


### Great Horned Owl (*Bubo virginianus*)

Weighing up to 3½ pounds and having a wingspan of nearly 5 feet, the great horned owl is Utah's largest resident owl. It lives throughout the state, including our densely populated cities.

Great horned owls are remarkably well adapted for catching prey. Sharp curved talons up to 1½ inches long grasp and kill a wide variety of prey including mice, rabbits, squirrels, ducks, porcupines, skunks, fish and more. Specially adapted silent wings, acute hearing, sound-gathering disc-shaped faces, extra large eyes 10 times more sensitive to light than those of humans, and necks that can turn 270°, are among the adaptations great horned owls possess to make them such efficient predators.

Great horned owls do not build their own nests, but instead, use those built by hawks, crows and squirrels. If you spot an active nest though, beware. Female great horned owls are very protective of their 4-5 down-feathered young and might use those sharp talons if someone gets too near!

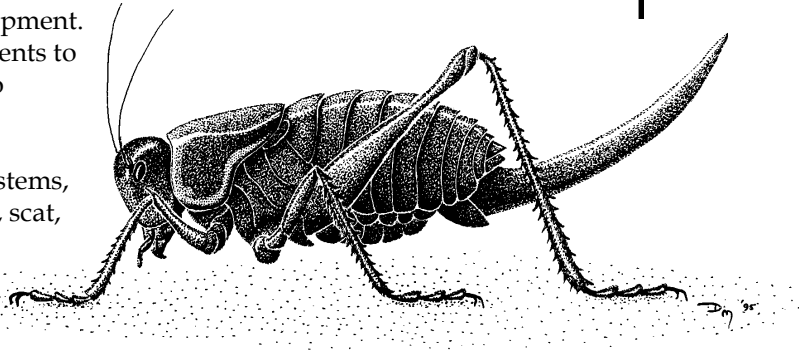


**Objectives:** • Students will explore ecosystems and discover relationships among living organisms and the nonliving world. (Science-Standard-3030-01)  
• Students will understand geographic concepts. (Social Studies-Standard 6030-04)  
• Students will understand that people use natural resources to meet their basic needs and these resources must be protected and conserved. (Social Studies-Standard 6030-03)

**Method:** Students explore and map a local ecosystem searching for evidence of wildlife.

**Background:** Exploration and discovery are fundamental components of learning at this stage of a child's development. The major purpose of this activity is to encourage students to explore, discover and map their neighborhoods, and to catalogue the wildlife found there.

Wildlife and signs of wildlife can be found in all ecosystems, even in urban areas. Tracks, feathers, cocoons, sounds, scat, webs, and nests are some examples of animal signs. Invertebrates are also common to all ecosystems. Look for moths, butterflies, sowbugs, ants, millipedes, bees and centipedes. Birds are common, too. Sparrows, starlings, pigeons and house finches are common to all Utah towns and cities.



*Mormon cricket*

**Procedure:** 1) Tell students that they are going to pretend to be explorers looking for wildlife clues. Explain some examples of evidence that animals leave and the senses students will use to discover the evidence.

2) Organize your students into teams.

3) Explain to the students they are to record their observations which will be transferred to a large map after returning to class. The students should include notes about the location of the animal signs.

4) Explain your expectations of student behavior, such as boundaries, safety and respect for animals and their signs.

5) If necessary, designate an adult to accompany each group.

6) Give each group notebook and pencils to record their observations.

7) Once the students return with their observations, provide them with a large sheet of paper and art supplies to create the map.

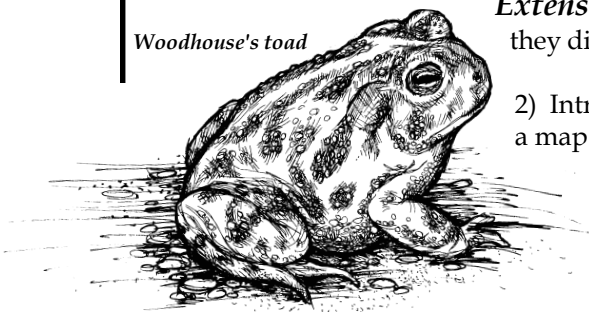
8) Create a display of the maps in the classroom or hallway.

**Extensions:** 1) Have the students create a food chain with the animals they discovered.

2) Introduce the concept of scale and legends and have the students create a map to scale.

3) Ask the students to predict how this map might have looked in the past and in the future.

*Woodhouse's toad*



## Action

## River Ways

For many years Americans used urban rivers as dumping grounds for almost every kind of waste imaginable. With the passage of the Clean Water Act in 1972, Americans began to repair the damage. As rivers became cleaner we realized that these waterways could become the center of life in our communities.

Utah is witnessing a remarkable example of this trend in towns and cities across

the state. Parkways are being built along many of Utah's urban rivers. These parkways provide a place where runners, walkers, birding enthusiasts, anglers and boaters can enjoy the forgotten beauty of urban rivers. Land is being set aside for nature reserves and places of solitude. Communities, schools and organizations are adopting sections of Utah's rivers to serve as stewards and protectors of these important wildlife corridors. There are plenty of opportunities for exploration, study, service projects and recreation for school children.

For more information on how you and your students can get involved, try these contacts;

### ***Jordan River***

Murray City, Doug Hill, (801) 264-2617  
Salt Lake City/County Coalition, Terry Way, (801) 468-2599  
Utah Society for Environmental Education, Tim Brown,  
(801) 328-1549

### ***Weber River***

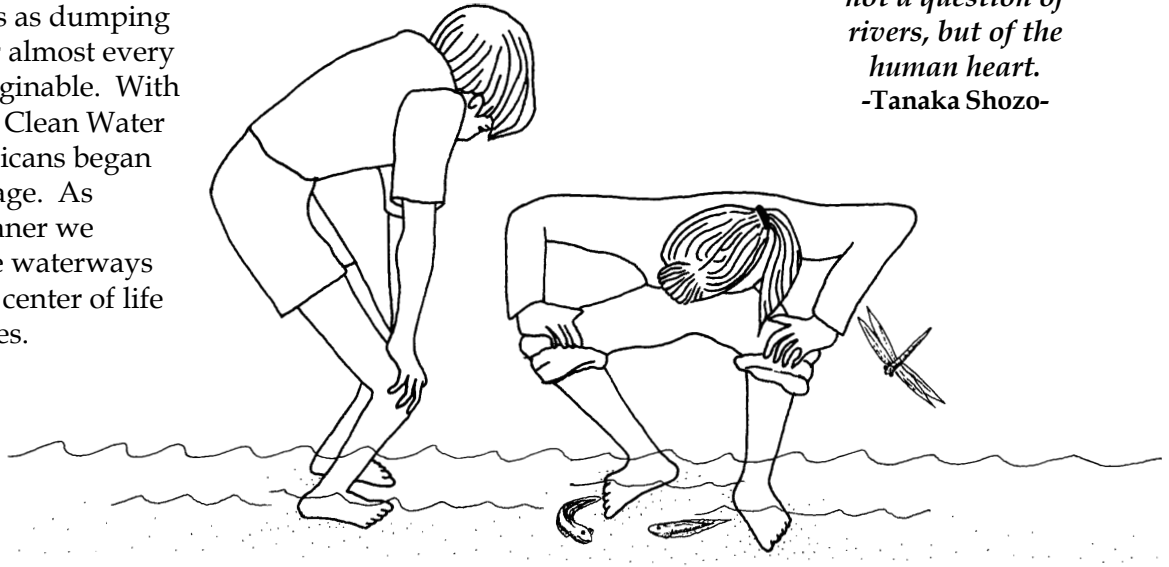
River Keeper, Weber County, Bob Askerlund,  
(801) 399-8676

### ***All Utah rivers and other water bodies***

Utah's Stream Team and Adopt-A-Waterbody, Utah  
Division of Wildlife Resources, Phil Douglass -  
Aquatic Education, (801) 538-4717

Pollution Prevention Program, Utah Department of  
Environmental Quality, Sonja Wallace, (801) 536-4477

*The care of rivers is  
not a question of  
rivers, but of the  
human heart.*  
-Tanaka Shozo-



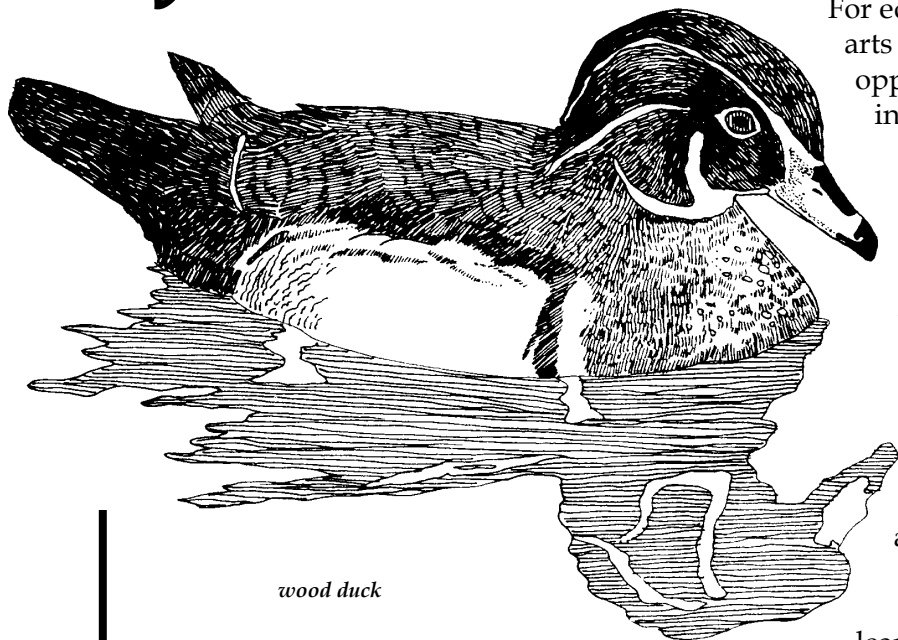
#### ***Free River Poster!***

Call Project WILD for a copy of the Colorado RiverWatch program poster. This beautiful poster reminds students that they can make a difference in their rivers. The poster carries the quote from Tanaka Shozo found at the top of this page.

## Contest

# The Federal Junior Duck Stamp Contest

Join thousands of students across the country in this dynamic wildlife conservation program. This annual contest gives students an opportunity to explore the beauty and diversity of waterfowl while providing an opportunity to win awards and prizes.



*wood duck*

For educators, this pairing of the visual arts with science provides an opportunity to use an interdisciplinary approach to education. The benefits are exciting:

- Focuses on the critical importance of wetlands to biodiversity
- Supports conservation education through the arts
- Provides education awards and scholarships
- Encourages urban students to learn about waterfowl

Project WILD and the Ogden Nature Center are sponsoring this year's contest. Teachers send their students art to project WILD. The art is grouped into four categories for judging: Grades K-3, 4-6, 7-9 and 10-12. Each category is awarded first, second and third place ribbons. A "Best of Show" is chosen from the winners of each category. The "Best of Show" is then sent to Washington, DC to compete against the "Best of Show" from all other states.

The Junior Duck Stamps are considered collectibles and are sold at post offices nationwide. The funds raised through the sale of the Junior Duck Stamps are dedicated to awards and scholarships for the participants.

For entry forms contact the Ogden Nature Center, (801) 621-7595.

### Utah Student Wins

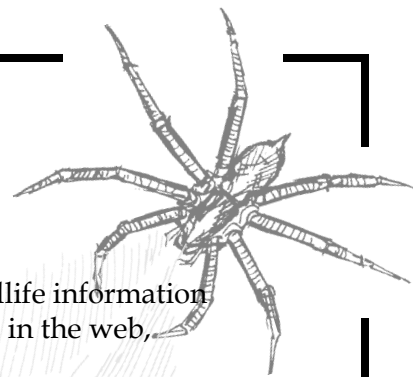
Last year Daniel Murri of Alta High won second place in the National Best of Show with his dramatic painting titled "Crossing the Snake-Readheads." Both Daniel and his teacher, Doug Allen, received an all expenses paid trip to Washington, DC to receive the award. Daniel competed against thousands of entrants from all across the country.

Daniel's success is remarkable because last year was the first year that Utah has participated in the contest. With Daniel's success, Utah's student artists have demonstrated they can compete at the national level.



## Internet

## Wild Places in Cyberspace!



The World Wide Web and other internet sites offer a wealth of wildlife information that teachers and students can tap into. To avoid getting tangled in the web, here are a few starting points:

The U.S. Fish and Wildlife Service at <http://www.fws.gov> provides information on endangered species in the U.S. and worldwide. To begin, choose "Endangered Species" from the home page menu. From here, the selection "Species" moves you to a complete list of U.S. endangered species. Details about the U.S. Endangered Species Act, species listing process, a list of contact persons, and information about the *Endangered Species Bulletin* are also accessible at this site.

Visit <http://www.epa.gov> which is the U.S. Environmental Protection Agency home page. Areas to explore from this home page include the "Citizen Information" and the "Search the EPA Server" sections. The latter can be used to find information on topics such as the Clean Water Act.

A fun place to stop is the National Wildlife Federation's home page at <http://www.igc.apc.org/nwf>. The "In the Classroom" section brings teachers to a new on-line resource called "Animal Tracks", a collection of lessons and activities divided into 5 major topic areas: Air, Habitat, People and the Environment, Wildlife and Endangered Species and Water.

The Envirolink Network at <http://www.envirolink.org> allows you to search for specific wildlife and environmental topics. For a listing of K-12 environmental education resources available on the internet go to <http://www.envirolink.org/environed/envirok12.html>. One item on the list is a Solid Waste Curriculum from Cornell University that can be accessed at <http://www.nceet.snre.umich.edu/>.

Know Your Environment found at <http://www.acnatsci.org/erd/ea> is a home page where you can access a series of bulletins providing unbiased, factual information to help you become better informed about issues of environmental concern.

You or your students can send an E-mail message directly to the White House by stopping at <http://mkn.co.uk/help/extra/people/thg>. Start by choosing the "Executive Branch" from the menu. Next, choose "The White House" and then, select "Comments". If you want to obtain the E-mail addresses of members of the U.S. Congress, go back to the original home page at this site and select "Congress". Within this section is an E-mail address option.

Global Atmospheric Change, the Green House Effect and Depletion of the Ozone Layer are topics covered in a comprehensive upper-level teacher's guide produced by the Penn State College of Education. This activity guide can be downloaded from the <http://www.ed.psu.edu> home page.

WhaleTimes at <http://www.lightspeed.net/~whaletimes> takes kids on an ocean adventure. Students can also ask ocean wildlife questions directly from "Jake the Sea Dog" at this site and visit a "Kid's Page" that contains a set of fun activities!

If you want more information, request a copy of "A Guide to Environmental Resources on the Internet" by calling the Project WILD office at (801) 538-4719. Have fun crawling through the web!



## Resource File

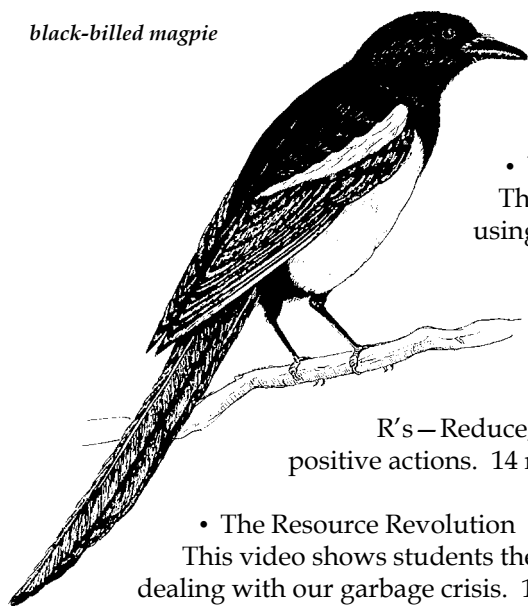
# Solid Waste Management: Waste Not, Want Not!

*Contact the Project WILD office to check out our new resource file about solid waste management. The following is a partial listing of the contents:*

### Activity Guides:

- Iowa's CLEAN SWEEP (Solid Waste Environmental Education Project)  
A compilation of hands-on activities for K-12 which develop understanding and motivate learners towards action.
- Closing the Loop: Integrated Waste Management Activities for School and Home  
A comprehensive set of activities for K-12. Activities are grouped into three themes: Everything ends up somewhere, We have options and we make choices, and Everything is connected.
- Municipal Solid Waste Management  
Activity guide produced by the U.S. Environmental Protection Agency (EPA) that introduces students to municipal solid waste problems. The curriculum provides adaptable lessons for all grade levels.
- Let's Reduce and Recycle: Curriculum for Solid Waste Awareness  
K-12 materials include an educator's activity guide, a school recycling program handbook, a poster and more, produced by the U.S. EPA.
- Kids C.A.R.E. (Kids that Can Actively Renew the Earth) Program  
A student activity book for 4-6 graders that includes activities and information to introduce kids to the issues of solid waste management and encourage them to find solutions.
- Recycling Study Guide, K-3 Supplement, Nature's Recyclers Activity Guide, and The Fourth "R"  
Four study guides loaded with activities and ideas that provide a foundation for a solid waste and recycling unit. Grades 4-12, with a K-3 supplement.

*black-billed magpie*



- NatureScope: Pollution: Problems and Solutions  
An educator's guidebook packed with lesson plans, activities and resources. Grades K-8.
- Pollution Solutions: Let's Clean Up Our Act  
K-8 activity packet designed for National Wildlife Week.
- Bottle Biology Resources Network  
This is a guide to bottle biology, a hands-on approach to biology using plastic beverage bottles.

### Videos:

- Kids Talkin' Trash  
Students learn how to make less trash by practicing the four R's — Reduce, Reuse, Recycle and Rot. A fun video that will encourage positive actions. 14 min. Grades 3 -7
- The Resource Revolution  
This video shows students the gains in plastics recycling, and the role recycling plays in dealing with our garbage crisis. 12 min. Grades 4-9

## Resources

## Yours for the Asking!

**Minimizing Browsing Damage by Deer:** Call Project WILD for a free copy of this detailed landscape planning pamphlet produced by the Utah Division of Wildlife Resources.

**Population Awareness Campaign Kits (PACKs):** These two kits, one for elementary students and one for secondary students, contain information and activities to help students gain insight into viewpoints of other kids from around the world on this issue. Call Project WILD to request a free packet for your class.

**Animal Tracks:** Kids can follow the tracks of 16 animals through this new book produced by the National Wildlife Federation. Geared for students in grades 4-7, this book contains puzzles, games, and hands-on activities. A separate Animal Tracks Guide for teachers is

available. The books can be ordered from the National Wildlife Federation at (800) 432-6564. Request Item No. 79928. The first set is free.

**USGS Water Education Posters:** Five different posters focus on water issues. Each poster is printed on the reverse side in two editions, one for elementary and the other for middle school use, and provides background information and activities related to the poster topic. There is also a black and white coloring version available for each poster. Call Project WILD for free copies.

**New Mexico Bat Poster:** Twelve species are featured on the poster with information about each species. Many of the featured bats are Utah species, too. Call Project WILD for your free copy.

**Colorado River Fish Poster:** Get your free poster of the four threatened and endangered fish of the Colorado River. Current information about the status of the fish is included. If you are interested, ask for the free activity guide, *Rivers at Risk*. Call Project WILD.

**State of Utah Legislative Roster, 1995-96:** Use this updated list of Utah's Senators and Representatives in issue investigation and action activities. Call Project WILD for your free copy.

**Project WILD (801) 538-4719**

### Free Wildlife Checklist!

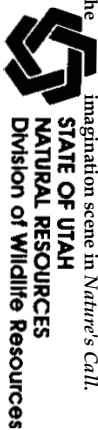
Call today to get your free copy of this informative pocket guide to Utah wildlife. Full-color photographs compliment an extensive listing. One free copy is available to each Project WILD teacher. Additional copies are available for \$1.00. Call Project WILD to place your order.

# Project WILD

Utah Division of Wildlife Resources  
1594 W. North Temple, Ste. 2110  
Salt Lake City, Utah 84116



*Growing WILD* is written by Bob Ellis, Diana Vos, and Audrey Walker. Jill Rensel drew the front page great-horned owl, cottonwood, carp, sparrow, pigeon, Woodhouse's toad, spider, and spider web. Doug Moore drew the sharp-shinned hawk, flying great-horned owl, and the Mormon cricket. Sarah Twombly drew the imagination scene in *Nature's Call*.



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